

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of interacting with a client process on a mobile device connected to a network over a wireless link to navigate an application, the method comprising the steps of:

- managing information at a mobile application server executing on a platform connected to the network, the information including first data describing a graphical element for display on the mobile device, the first data including a first reference to the graphical element, and values for a plurality of attributes of the graphical element, wherein one of the values associated with one of the plurality of attributes is a second reference to a page associated with requesting a service from a first application;
- sending to the client process for rendering the graphical element on the mobile device, second data based on the first data, the second data including the first reference;
- receiving third data indicating the first reference in response to a user of the mobile device selecting the graphical element; and
- in response to receiving the third data, performing the steps of:
 - reading from the third data the first reference;
 - using the first reference that is read from the third data to locate the first data that describes the graphical element;
 - after locating the first data that describes the graphical element, reading from the first data the second reference; and
 - requesting the page from the first application based on the second reference.

2. (Original) The method of Claim 1, wherein the second data does not include the second reference to the page.

- 1 3. (Original) The method of Claim 1, wherein the step of managing further comprises
2 storing the first data in a data structure.
- 1 4. (Original) The method of Claim 3, wherein the second reference is a value of a next
2 page attribute of the data structure.
- 1 5. (Original) The method of Claim 3, wherein the data structure inherits methods and
2 attributes from a bean class for exhibiting persistence and serialization.
- 1 6. (Original) The method of Claim 5, wherein the bean class is a JavaBeans class.
- 1 7. (Original) The method of Claim 1, further comprising the step of receiving fourth data
2 from a second application, the fourth data describing the graphical element and including the
3 second reference to the page associated with requesting the service from the first application.
- 1 8. (Original) The method of Claim 7, wherein the second application is different than the
2 first application.
- 1 9. (Original) The method of Claim 7, wherein the second application is the same as the
2 first application.
- 1 10. (Original) The method of Claim 7, said step of managing the information further
2 comprising generating the first reference based on the fourth data.
- 1 11. (Original) The method of Claim 1, further comprising the step of receiving fourth data
2 from the first application in response to said step of requesting the page, the fourth data
3 describing the page and comprising fifth data describing a different graphical element for
4 display on the mobile device, the fifth data including a third reference to a different page
5 associated with requesting a service from a second application.

1 12. (Original) The method of Claim 11, wherein the information managed by the mobile
2 applications server includes the fifth data.

1 13. (Original) The method of Claim 1, wherein the information managed includes fourth
2 data about a plurality of pages associated with a plurality of applications and the step of
3 managing the information further comprises generating a unique name for the page among the
4 plurality of pages based on the second reference.

1 14. (Original) The method of Claim 1, said step of requesting the page further comprising
2 providing fourth data to the application based the information managed by the mobile
3 applications server.

1 15. (Original) The method of Claim 14, wherein the fourth data includes the second
2 reference.

1 16. (Original) The method of Claim 14, wherein the third data does not include the fourth
2 data.

1 17. (Original) The method of Claim 14, wherein the second data does not include the
2 fourth data.

1 18. (Original) The method of Claim 14, wherein the fourth data comprises a universal
2 resource locator (URL) address for the page for use with an Internet protocol (IP) on the
3 network.

1 19. (Original) The method of Claim 18, wherein the fourth data further comprises input
2 parameters and corresponding values for use by the application at the URL address in
3 providing the service associated with the page.

1 20. (Original) The method of Claim 1, wherein:
2 the graphical element is included on a different page associated with requesting a
3 different service from a second application;
4 the different page has a third reference; and
5 the method further comprises requesting the different service from the second
6 application in response to receiving the third data based on the third reference.

1 21. (Original) The method of Claim 20, wherein the second application is different than
2 the first application.

1 22. (Original) The method of Claim 20, wherein the second application is the same as the
2 first application.

1 23. (Original) The method of Claim 20, wherein:
2 the information managed by the mobile applications server includes fourth data
3 describing the different page including the third reference to the different page;
4 the step of requesting the different service from the second application further
5 comprising sending fifth data to the second application based on at least one of
6 the first data and the fourth data.

1 24. (Original) The method of Claim 20, wherein the step of requesting the different
2 service from the second application comprises invoking a particular method of the second
3 application.

1 25. (Original) The method of Claim 24, wherein:
2 the particular method is an event handling method for an exiting page event associated
3 with the different page;
4 the step of invoking the particular method further comprises generating an exiting
5 page event for the different page; and

6 the exiting page event includes the third reference.

1 26. (Original) The method of Claim 25, wherein:
2 the page is data structure that inherits methods and attributes from a mobile bean class
3 defining an event handling interface for an exiting page event; and
4 the particular method is an implementation of the event handling interface; and
5 the page includes the particular method.

1 27. (Original) The method of Claim 26, wherein the mobile bean class inherits methods
2 and attributes from a JavaBeans class.

1 28. (Original) The method of Claim 20, wherein the second data does not include the third
2 reference.

1 29. (Original) The method of Claim 20, wherein the third data does not include the third
2 reference.

1 30. (Original) The method of Claim 20, said step of requesting the different service
2 further comprising providing fourth data to the application.

1 31. (Original) The method of Claim 30, wherein the fourth data comprises a universal
2 resource locator (URL) address for the page for use with an Internet protocol (IP) on the
3 network.

1 32. (Original) The method of Claim 31, wherein the fourth data further comprises input
2 parameters and corresponding values for use by the application at the URL address in
3 providing the service associated with the page.

1 33. (Original) The method of Claim 31, wherein the second data does not include the
2 URL address.

1 34. (Original) The method of Claim 31, wherein the third data does not include the URL
2 address.

1 35. (Currently Amended) A method of interacting with a client process on a mobile
2 device connected to a network over a wireless link to navigate an application, the method
3 comprising the steps of:

4 managing information at a mobile application server executing on a platform

5 connected to the network, the information including

6 first data describing a plurality of pages sent for display on the mobile device,

7 each page associated with requesting a service from an application,

8 wherein each page has one or more graphical elements and the first

9 data includes

10 a first reference to each graphical element of the one or more graphical

11 elements, and

12 values for a plurality of attributes of each graphical element, wherein

13 one of the values associated with one of the plurality of

14 attributes is a second reference to one page of the plurality of

15 pages, and

16 second data describing associations between special keys on the mobile device

17 and page changes among the plurality of pages;

18 receiving third data from the client process indicating a user of the mobile device has

19 pressed a particular key of the special keys; and

20 in response to receiving the third data, performing the steps of:

21 determining a particular page change of the page changes associated with the

22 particular key,

23 requesting the particular page change from the application,

24 determining a particular page of the plurality of pages based on the first data

25 and the particular page change, wherein the step of determining the

26 particular page further comprises:

27 using the particular page change of the page changes to locate the first
28 data that describes the plurality of pages,
29 after locating the first data, reading from the first data the particular
30 second reference to the particular page, and
31 sending, to the client process for rendering a particular graphical element of
32 the particular page, fourth data based on the first data, the fourth data
33 including a particular first reference to the particular graphical element.

1 36. (Original) The method of Claim 35, wherein the page changes include a page back
2 change and a page forward change.

1 37. (Original) The method of Claim 35, wherein the page changes include a return to a
2 menu page.

1 38. (Previously Presented) The method of Claim 35, said step of requesting the particular
2 page change from the application comprising the step of requesting the particular page from
3 the application.

1 39. (Previously Presented) The method of Claim 38, said step of requesting the particular
2 page from the application comprising the steps of:
3 generating fifth data indicating the particular page; and
4 invoking a first method of the application with the fifth data as an input parameter.

1 40. (Previously Presented) The method of Claim 39, wherein:
2 the fifth data describes an event; and
3 the first method of the application is an event handling method.

1 41. (Currently Amended) A computer-readable medium carrying instructions for
2 interacting with a client process on a mobile device connected to a network over a wireless

link to navigate an application, the computer-readable medium comprising instructions for causing one or more processors to perform the steps of:

- managing information at a mobile application server executing on a platform connected to the network, the information including first data describing a graphical element for display on the mobile device, the first data including a first reference to the graphical element, and values for a plurality of attributes of the graphical element, wherein one of the values associated with one of the plurality of attributes is a second reference to a page associated with requesting a service from a first application;
- sending to the client process for rendering the graphical element on the mobile device, second data based on the first data, the second data including the first reference;
- receiving third data indicating the first reference in response to a user of the mobile device selecting the graphical element; and
- in response to receiving the third data, performing the steps of:
 - reading from the third data the first reference;
 - using the first reference that is read from the third data to locate the first data that describes the graphical element;
 - after locating the first data that describes the graphical element, reading from the first data the second reference; and
 - requesting the page from the first application based on the second reference.

42. (Original) The computer-readable medium of Claim 41, wherein the second data does not include the second reference to the page.

43. (Original) The computer-readable medium of Claim 41, wherein the step of managing further comprises storing the first data in a data structure.

44. (Original) The computer-readable medium of Claim 43, wherein the second reference is a value of a next page attribute of the data structure.

1 45. (Original) The computer-readable medium of Claim 43, wherein the data structure
2 inherits methods and attributes from a bean class for exhibiting persistence and serialization.

1 46. (Original) The computer-readable medium of Claim 45, wherein the bean class is a
2 JavaBeans class.

1 47. (Original) The computer-readable medium of Claim 41, the instructions further
2 causing the one or more processors to perform the step of receiving fourth data from a second
3 application, the fourth data describing the graphical element and including the second
4 reference to the page associated with requesting the service from the first application.

1 48. (Original) The computer-readable medium of Claim 47, wherein the second
2 application is different than the first application.

1 49. (Original) The computer-readable medium of Claim 47, wherein the second
2 application is the same as the first application.

1 50. (Original) The computer-readable medium of Claim 47, said step of managing the
2 information further comprising generating the first reference based on the fourth data.

1 51. (Original) The computer-readable medium of Claim 41, the instructions further
2 causing the one or more processors to perform the step of receiving fourth data from the first
3 application in response to said step of requesting the page, the fourth data describing the page
4 and comprising fifth data describing a different graphical element for display on the mobile
5 device, the fifth data including a third reference to a different page associated with requesting
6 a service from a second application.

1 52. (Original) The computer-readable medium of Claim 51, wherein the information
2 managed by the mobile applications server includes the fifth data.

1 53. (Original) The computer-readable medium of Claim 41, wherein the information
2 managed includes fourth data about a plurality of pages associated with a plurality of
3 applications and the step of managing the information further comprises generating a unique
4 name for the page among the plurality of pages based on the second reference.

1 54. (Original) The computer-readable medium of Claim 41, said step of requesting the
2 page further comprising providing fourth data to the application based the information
3 managed by the mobile applications server.

1 55. (Original) The computer-readable medium of Claim 54, wherein the fourth data
2 includes the second reference.

1 56. (Original) The computer-readable medium of Claim 54, wherein the third data does
2 not include the fourth data.

1 57. (Original) The computer-readable medium of Claim 54, wherein the second data does
2 not include the fourth data.

1 58. (Original) The computer-readable medium of Claim 54, wherein the fourth data
2 comprises a universal resource locator (URL) address for the page for use with an Internet
3 protocol (IP) on the network.

1 59. (Original) The computer-readable medium of Claim 58, wherein the fourth data
2 further comprises input parameters and corresponding values for use by the application at the
3 URL address in providing the service associated with the page.

1 60. (Original) The computer-readable medium of Claim 41, wherein:
2 the graphical element is included on a different page associated with requesting a
3 different service from a second application;

4 the different page has a third reference; and
5 the instructions further causing the one or more processors to perform the step of
6 requesting the different service from the second application in response to
7 receiving the third data based on the third reference.

1 61. (Original) The computer-readable medium of Claim 60, wherein the second
2 application is different than the first application.

1 62. (Original) The computer-readable medium of Claim 60, wherein the second
2 application is the same as the first application.

1 63. (Original) The computer-readable medium of Claim 60, wherein:
2 the information managed by the mobile applications server includes fourth data
3 describing the different page including the third reference to the different page;
4 the step of requesting the different service from the second application further
5 comprising sending fifth data to the second application based on at least one of
6 the first data and the fourth data.

1 64. (Original) The computer-readable medium of Claim 60, wherein the step of requesting
2 the different service from the second application comprises invoking a particular method of
3 the second application.

1 65. (Original) The computer-readable medium of Claim 64, wherein:
2 the particular method is an event handling method for an exiting page event associated
3 with the different page;
4 the step of invoking the particular method further comprises generating an exiting
5 page event for the different page; and
6 the exiting page event includes the third reference.

1 66. (Original) The computer-readable medium of Claim 65, wherein:

2 the page is data structure that inherits methods and attributes from a mobile bean class
3 defining an event handling interface for an exiting page event; and
4 the particular method is an implementation of the event handling interface; and
5 the page includes the particular method.

1 67. (Original) The computer-readable medium of Claim 66, wherein the mobile bean class
2 inherits methods and attributes from a JavaBeans class.

1 68. (Original) The computer-readable medium of Claim 60, wherein the second data does
2 not include the third reference.

1 69. (Original) The computer-readable medium of Claim 60, wherein the third data does
2 not include the third reference.

1 70. (Original) The computer-readable medium of Claim 60, said step of requesting the
2 different service further comprising providing fourth data to the application.

1 71. (Original) The computer-readable medium of Claim 70, wherein the fourth data
2 comprises a universal resource locator (URL) address for the page for use with an Internet
3 protocol (IP) on the network.

1 72. (Original) The computer-readable medium of Claim 71, wherein the fourth data
2 further comprises input parameters and corresponding values for use by the application at the
3 URL address in providing the service associated with the page.

1 73. (Original) The computer-readable medium of Claim 71, wherein the second data does
2 not include the URL address.

1 74. (Original) The computer-readable medium of Claim 71, wherein the third data does
2 not include the URL address.

1 75. (Currently Amended) A computer-readable medium carrying instructions for
2 interacting with a client process on a mobile device connected to a network over a wireless
3 link to navigate an application, the computer-readable medium comprising instructions for
4 causing one or more processors to perform the steps of:
5 managing information at a mobile application server executing on a platform
6 connected to the network, the information including
7 first data describing a plurality of pages sent for display on the mobile device,
8 each page associated with requesting a service from an application,
9 wherein each page has one or more graphical elements and the first
10 data includes
11 a first reference to each graphical element of the one or more graphical
12 elements, and
13 values for a plurality of attributes of each graphical element, wherein
14 one of the values associated with one of the plurality of
15 attributes is a second reference to one page of the plurality of
16 pages, and
17 second data describing associations between special keys on the mobile device
18 and page changes among the plurality of pages;
19 receiving third data from the client process indicating a user of the mobile device has
20 pressed a particular key of the special keys; and
21 in response to receiving the third data, performing the steps of:
22 determining a particular page change of the page changes associated with the
23 particular key,
24 requesting the particular page change from the application,
25 determining a particular page of the plurality of pages based on the first data
26 and the particular page change, wherein the step of determining the
27 particular page further comprises:
28 using the particular page change of the page changes to locate the first
29 data that describes the plurality of pages.

30 after locating the first data, reading from the first data the particular
31 second reference to the particular page, and
32 sending, to the client process for rendering a particular graphical element of
33 the particular page, fourth data based on the first data, the fourth data
34 including a particular first reference to the particular graphical element.

1 76. (Original) The computer-readable medium of Claim 75, wherein the page changes
2 include a page back change and a page forward change.

1 77. (Original) The computer-readable medium of Claim 75, wherein the page changes
2 include a return to a menu page.

1 78. (Previously Presented) The computer-readable medium of Claim 75, said step of
2 requesting the particular page change from the application comprising the step of requesting
3 the particular page from the application.

1 79. (Previously Presented) The computer-readable medium of Claim 78, said step of
2 requesting the particular page from the application comprising the steps of:
3 generating fifth data indicating the particular page; and
4 invoking a first method of the application with the fifth data as an input parameter.

1 80. (Previously Presented) The computer-readable medium of Claim 79, wherein:
2 the fifth data describes an event; and
3 the first method of the application is an event handling method.